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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,052	11/27/2001	Roger Cook	065424/9015	9713
23585	7590	11/26/2003	EXAMINER	
MICHAEL BEST & FRIEDRICH LLP 3773 CORPORATE PARKWAY SUITE 360 CENTER VALLEY, PA 18034-8217			PHAM, LEDA T	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/995,052	COOK, ROGER	
	Examiner	Art Unit	
	Leda T. Pham	2834	

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11 and 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to Amendment filed on 9/4/03.
2. Claims 1 – 8, 10 – 11, 13 - 17 are presented for examination.
Claims 9, 12 are canceled.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first and second interengaged compressor rotors must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1 – 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 1, the first and second interengaged compressor rotors are new subject

matters that do not have support from the specification. In light of the drawing, it is understood that the typical rotary screw air compressor having first and second interengaged compressor rotors. In claim 2, "the portion of the drive shaft providing cantilever support of the motor rotor is free of vertical support" does not describe from the specification.

Claims 3 – 8 are rejected by depend to claim 1.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the claim, "the portion of the drive shaft providing cantilever support of the motor rotor is free of vertical support" does not describe from the specification how the drive shaft is free of vertical support. Does it mean that the portion of drive shaft having no bearing to support for rotating? If it is not the case, please describe in detail in the specification in order for exam how the portion of the drive shaft providing cantilever of the motor rotor is free of vertical support.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4 –6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unnewehr et al. (U.S. Patent No. 5,222,874) in view of Kawahara et al. (U.S. Patent No. 5,217,359).

Referring to claim 1, Unnewehr teaches a compressor and driving motor assembly (figure 2) in which the motor (12) comprises a rotor and a stator assembly (54, 56), and the compressor (14) comprises a main body supporting first and second interengaged compressor rotors (80, 82), and wherein a drive shaft (50) extend from one of the first and second compressor rotors (82) and the motor (12), rotor is mounted directly on the drive shaft. However, Unnewehr does not teach the drive shaft being supported by the compressor main body to provide cantilever support of the motor rotor.

Kawahara teaches in his invention (figure 4) the compressor having a main body (51) supporting the shaft (16) to provide cantilever supported of the motor rotor (18).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the main body of the compressor for supporting the motor rotor shaft as taught by Kawahara. Doing so would provide a cantilever-supported to the rotor.

Referring to claim 4, Unnewehr teaches the assembly in which the rotor is shaped so as to have a central longitudinal aperture adapted to fit to a corresponding tapered portion of the drive shaft (figure 2).

Referring to claim 5, Unnewehr teaches the assembly in which the compressor has a housing, and the stator assembly is connected to the housing of the compressor (figure 2).

Referring to claim 6, Unnewehr teaches the assembly in which the stator assembly is directly connected to the housing (figure 2).

10. Claims 1 –3, 7 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson et al (U.S. Patent No. 5,912,516) in view of Applicant admitted prior art (AAPA).

Referring to claim 1, Atkinson teaches a compressor and driving motor assembly (figure 4) in which the motor comprises a rotor and a stator assembly (124), and the compressor comprises a main body (114) supporting compressor rotors (116), and wherein a drive shaft (118) extend from compressor rotors (116) and the motor (124), rotor is mounted directly on the drive shaft, the drive shaft being supported by the compressor main body (the flange between compressor housing 114 and stator housing 113) to provide cantilever support of the motor rotor.

The AAPA teaches the assigned reference number 1 is typical rotary screw air compressor having the first and second interengaged compressor rotors in figure 1. In figure 2, the present invention teaches the typical rotary screw air compressor is assigned by number 12. Thus, from the prior art to the present invention, the typical rotary screw air compressor is unchanged, the only modifying part of the invention is the driving motor assembly. Therefore, any element and function in the black box prior art compressor is also comprised in the present invention compressor for supporting the motor.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Atkinson's compressor and driving motor assembly by using the typical rotary screw air compressor as taught by AAPA. Doing so would support the motor.

Referring to claim 2, Atkinson teaches the assembly wherein the portion of the drive shaft providing cantilever support of the motor rotor is free of vertical support (figure 1, no bearing support the at end of the motor 26)

Referring to claim 3, AAPA teaches the assembly in which the motor is a hybrid permanent magnet motor providing an induction mode and a permanent magnet mode (lines 10 -- 15, page 2).

Referring to claim 7, Atkinson teaches the assembly in which the stator assembly (113) is connected to the housing (114) by way of an adapter flange (the unassigned number flange between 114 and 113).

Referring to claim 8, AAPA teaches the assembly in which the compressor is an air compressor (line 11, page 1).

Referring to claim 10, AAPA teaches A rotary screw air compressor and driving motor assembly, the driving motor being a hybrid permanent magnet motor providing an induction mode and a permanent magnet mode (lines 10 – 15, page 2).

Referring to claim 11, AAPA teaches the assembly in which the compressor is and air compressor (line 11, page 1).

Referring to claim 13, AAPA teaches the assembly in which the motor is a fixed speed motor (line 16, page 1).

Referring to claim 14, AAPA teaches the assembly in which the motor is a variable speed motor (line 20, page 1).

Referring to claim 15, AAPA teaches the assembly in which the compressor is of flooded type (line 17, page 1).

Referring to claim 16, AAPA teaches the assembly in which the compressor is of oil-free type (line 17, page 1).

Referring to claim 17, Atkinson teaches the assembly in which the motor comprising a motor rotor (124) which is mounted directly on to a drive shaft (118) extending from a compressor rotor (116) of the compressor.

Response to Arguments

11. Applicant's arguments with respect to claims 1 - 17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (703) 305-4864. The examiner can normally be reached on M-F (7:30-5:00) first Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

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Leda T. Pham
Examiner
Art Unit 2834

LTP
November 13, 2003


BURTON S. MULLINS
PRIMARY EXAMINER